



SUSTAIN  
ABILITY



DC

# Financing Green Building Improvements in the District

**Green Building Symposium and Expo**

September 24, 2013

# Introductions



**Tina Poole Johnson**

Business Development Officer

Self-Help Credit Union and Ventures Fund



**Andrew Gilligan**

Senior Associate

Sol Systems, LLC



**John Supp**

Director of Account Management

DC Sustainable Energy Utility

# Agenda



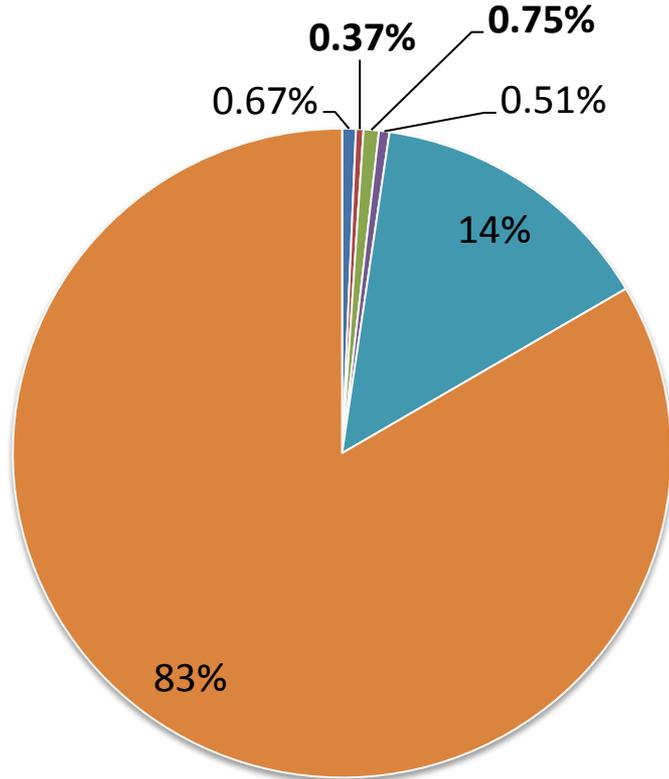
1. Overview of financing options
2. “Green” Loans
3. Renewable Energy Financing
4. DC SEU
5. DC PACE
6. Q&A

# Focus on privately owned commercial buildings

16% of the Buildings; 59% of the Sq Ft

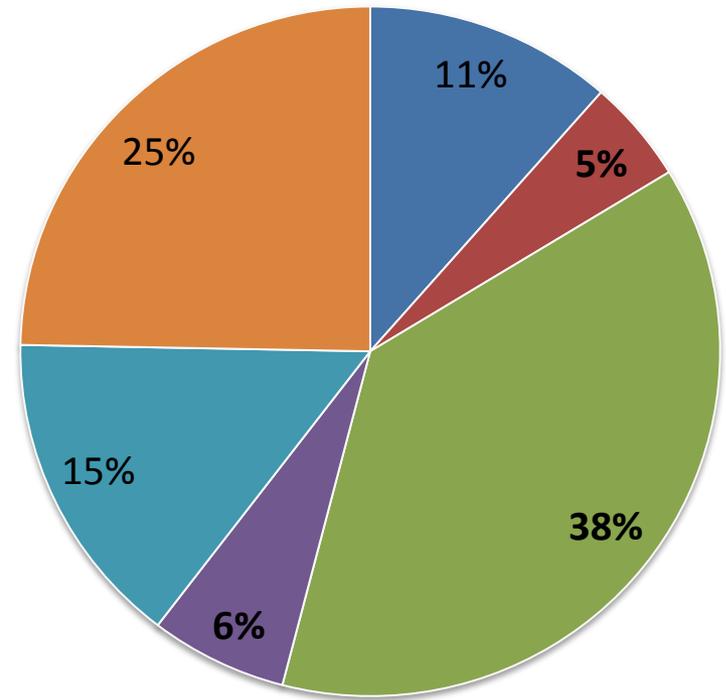


### Buildings



128 thousand buildings

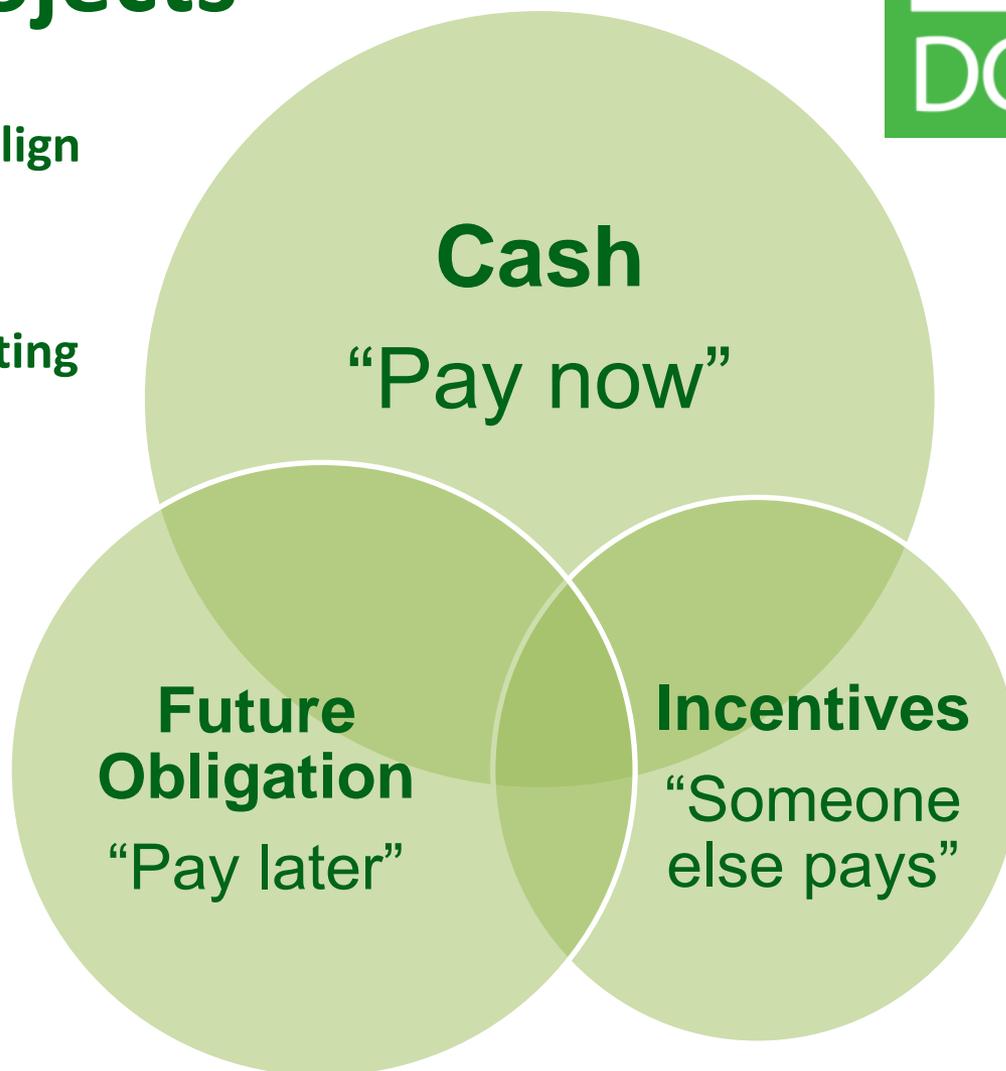
### Building Area



730 million gross square feet

# Three ways to fund green improvement projects

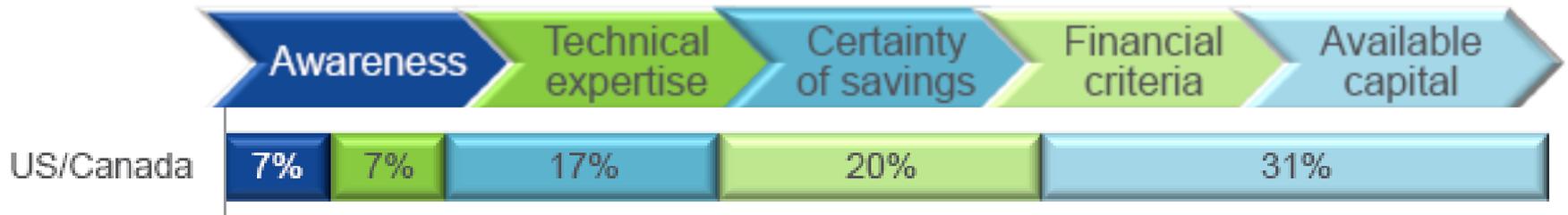
- Mix of funding sources should align with project, property use, and property ownership structure.
- Things to consider when evaluating financing options:
  - Cost of capital
    - Interest rate
    - Term
  - Risk & Recourse
  - Balance sheet treatment
  - Transparency
  - Simplicity
  - Opportunity cost



# Access to capital is the top barrier



What is the top barrier to pursuing energy efficiency for your organization?



Source: Energy efficiency indicator 2013 Institute for Building Efficiency

# Financing options for green improvement projects



**“Green” Loan**

**Equipment Lease**

**PACE (Property Assessed Clean Energy)**

**Power Purchase Agreement/ Shared Savings Agreement**

**On-Bill**

# Incentive programs available in the District



## DC Sustainable Energy Utility

### DDOE

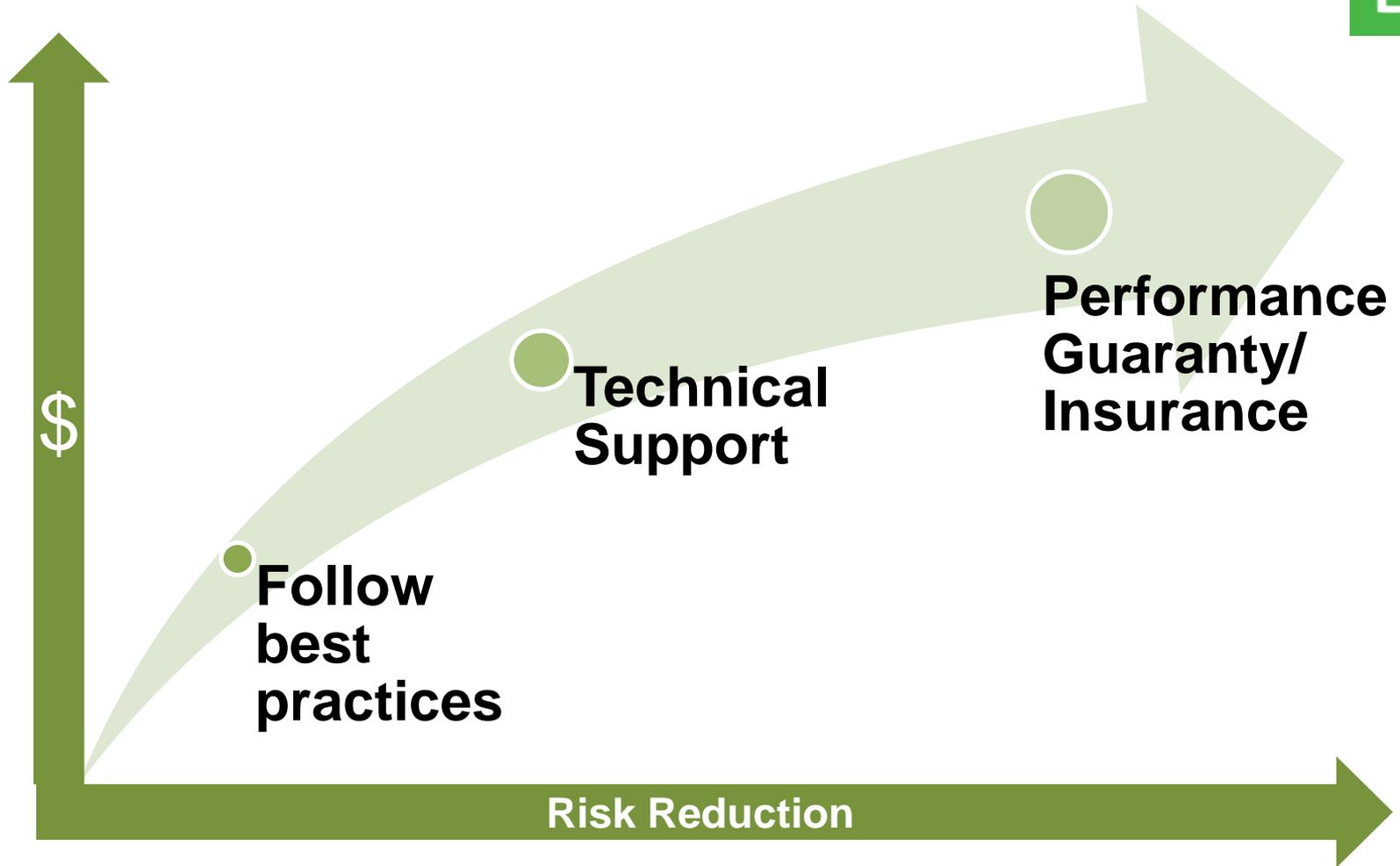
- Renewable Energy Investment Program
- Weatherization Assistance Program
- Small Business Energy Efficiency Program
- Condominium and Coop Building Energy Efficiency Program
- Green Roof Rebate
- Stormwater Retention Credits

### Public Service Commission

- Renewable Energy Certificates

### Federal Tax Incentives

# Ways to increase certainty of expected benefits (i.e. reduce risk)



# SELF HELP

DC Green Building Symposium 2013

# Self-Help's 4 Lines of Business

## Retail Financial Services

- NC, CA, Chicago-metro, and DC metro
- 29 full-service branches
- Over \$1.6B assets
- Nearly 81,000 members
- \$32M consumer loans



## Commercial Lending

In 2012, lent:

- \$74M to businesses, nonprofits, and community facilities, including \$22M to charter schools
- \$33M for home loans



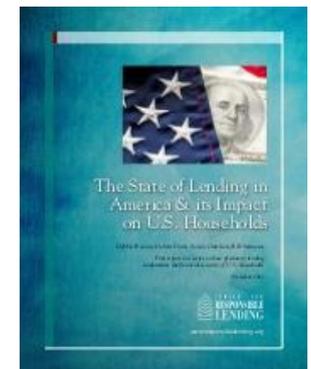
## Real Estate Development

- Own 100+ single family lots in key neighborhoods
- Own 20 commercial properties in NC, CA, DC
- In 2012, invested \$9M in community development projects



## Center for Responsible Lending

- Federal and state policy research on predatory lending and consumer issues
- Helped stop or limit payday lending in several states, which will save consumers \$1.1B annually



## Property owner's questions:

1. Why should I care about energy and water efficiency and renewable energy?
2. What specifically should I be doing to my building?
3. Who can I trust to implement these measures in my building?
4. How should/can I pay for it?

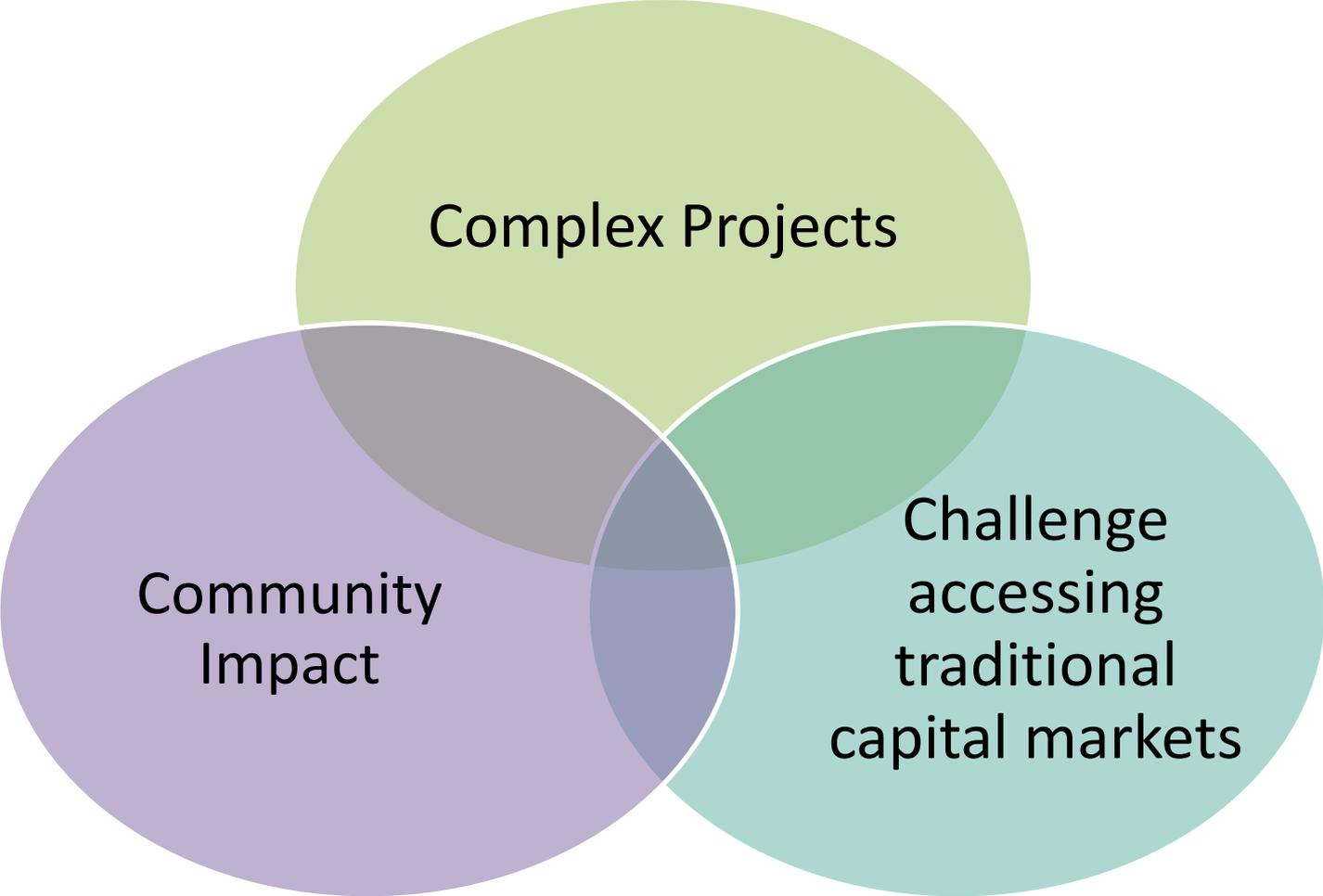
## Lender's questions:

1. Will the borrower be able to pay the debt service?
2. Will the borrower be able to repay the loan?
3. What is the collateral or other security?
4. What is the capacity of the borrower?
5. For some lenders: what's the mission impact?

# Self-Help's Commercial Lending

- Credit union
- New Markets Tax Credit
- Ventures Fund, including Neighborhood Stabilization Program

# Self-Help's Lending Sweet Spot





## **American Tobacco Campus (Durham, NC)**

- Catalytic project to the resurgence of downtown Durham
- One of largest historic tax credit projects in NC



## Habitat for Humanity (Charlotte, NC)

- Transformed 48,000 SF former Kroger site into Habitat complex
- Administrative offices, coffee/book shop, second ReStore
- 16 apartments for Americorp volunteers

# Energy Loan Fund Discount



- Renovations
- Renewable energy
- Energy and water conservation measures
- Washington DC &
  - Atlanta
  - North Carolina
  - Houston
  - LA, San Francisco
  - Chicago
  - Miami



## Eastern Carolina Organics (Durham, NC)

- Organic Distribution Center, small business startup space
- Energy efficient, former brownfield site
- 26,000 ft<sup>2</sup>



## Hospitality High School of Washington DC

- Public charter school
- Energy Loan Fund borrower



**THANK YOU!**

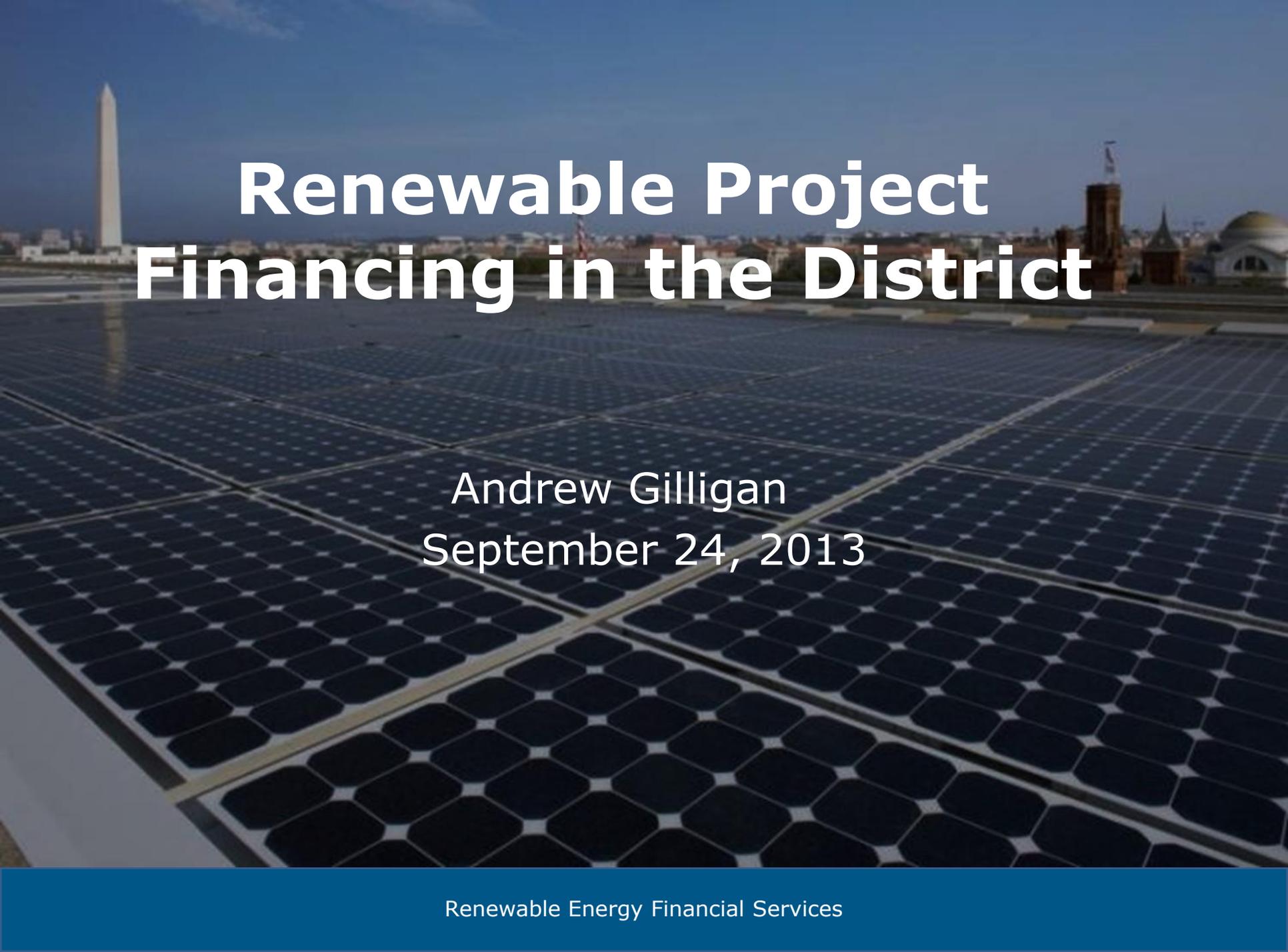
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A photograph of a rooftop solar panel array. The panels are dark blue with a grid pattern of silver lines. In the background, the Washington Monument is visible on the left, and other city buildings are on the right under a clear blue sky.

# Renewable Project Financing in the District

Andrew Gilligan  
September 24, 2013

# Agenda

- About Sol Systems
- Renewables (so Solar) in DC
- Financing Options
- Case Study
- Wrap Up and Q&A





# ABOUT SOL SYSTEMS

# Sol Systems: What We Do

**We are a boutique financial services firm that:**

- Offers **investors** direct access to renewable energy assets
- Provides **developers** with project financing solutions
- Helps **system owners** monetize SRECs





# RENEWABLES (SO SOLAR) IN DC

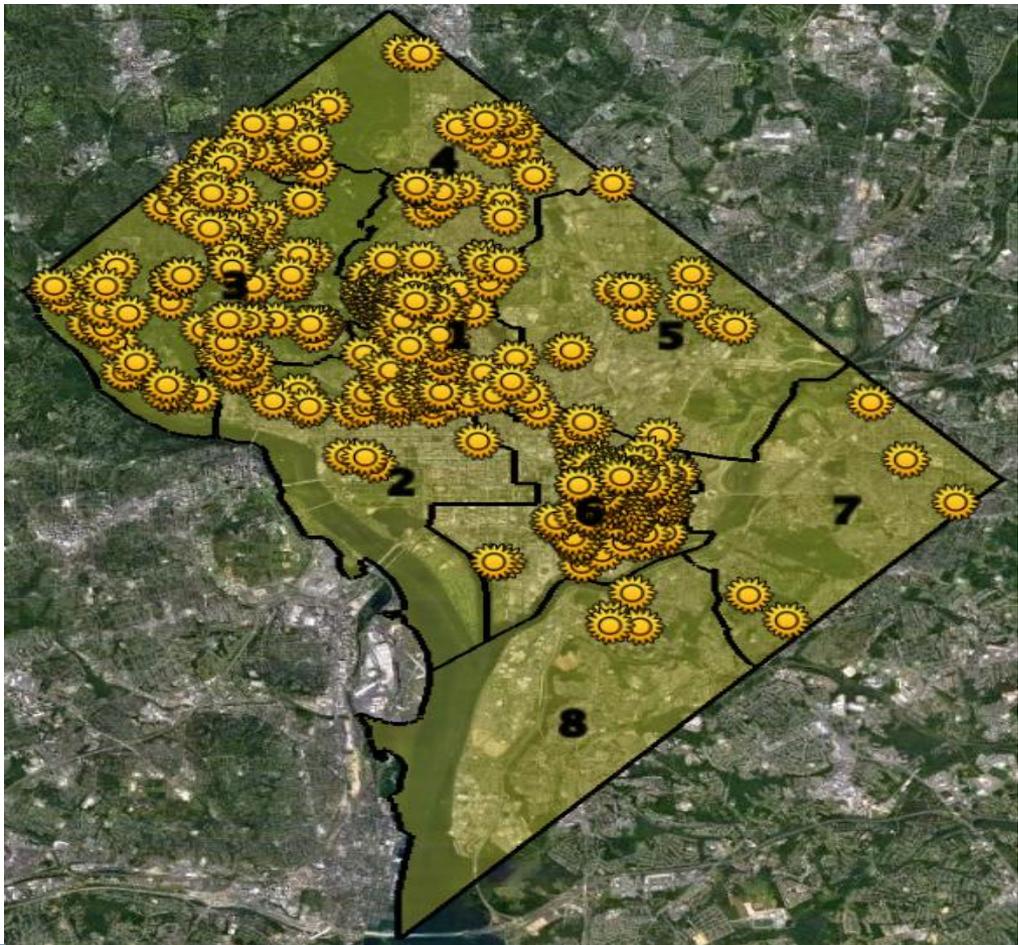
# Renewables in DC

**Solar photovoltaic (PV) systems** produce electricity, often on rooftops of homes, businesses, schools, and other buildings. That electricity can power those buildings and even be sold back into the electric grid. In DC – 5.2 MW, almost 800 systems.

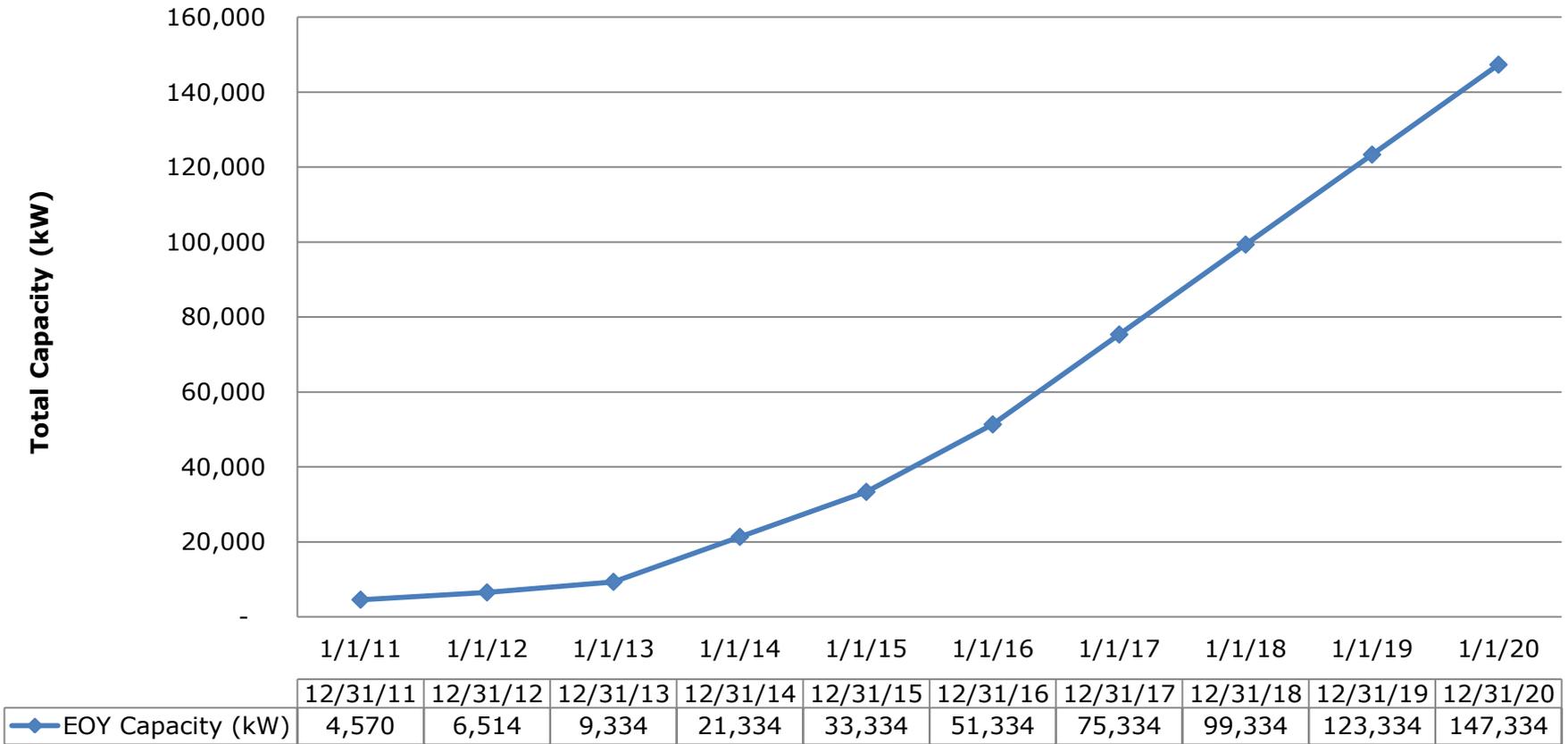


**Solar thermal systems** capture solar radiation to commonly heat domestic water, or even be an energy source for space heating. Typical applications include solar water heating (SWH) for residential homes, multi-family buildings, and businesses with a large demand for hot water. In DC – 2.7 MW equivalent, 44 systems

# Solar in DC



# Solar in DC Taking Off



A wide-angle photograph of a solar farm. The image shows rows of blue photovoltaic solar panels stretching towards the horizon under a clear, bright blue sky. The panels are mounted on a ground covered with small, light-colored stones. The perspective is from a low angle, looking across the rows of panels.

# SOLAR FINANCING OPTIONS

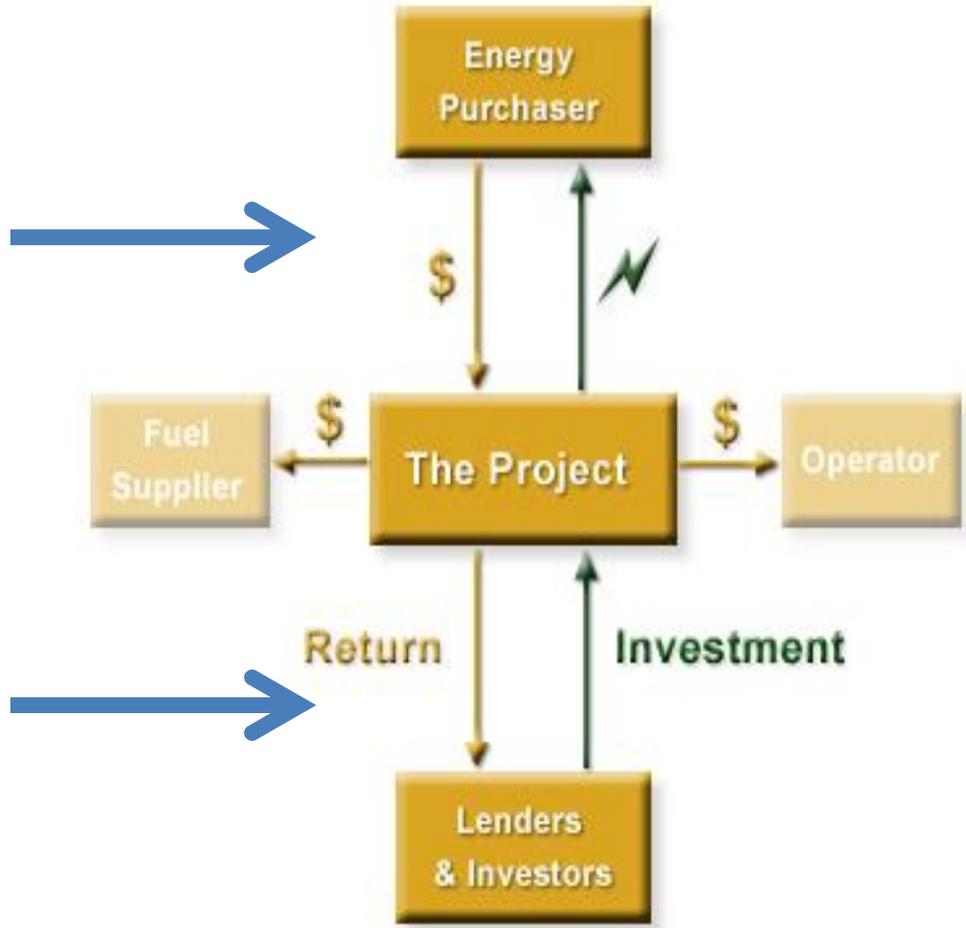
# Host Options To Go Solar

<u>Direct Purchase</u>	<u>Third Party Financing</u>
<ul style="list-style-type: none"> <li>• Host agrees to all-in purchase price to <b>buy and own</b> solar system (i.e. \$3/Watt).</li> <li>• Benefits for the Host:               <ul style="list-style-type: none"> <li>– <b>Electricity Savings</b></li> <li>– <b>SRECs</b></li> <li>– <b>Investment Tax Credit</b></li> <li>– <b>Depreciation Losses</b></li> </ul> </li> <li>• Attractive option for hosts with:               <ul style="list-style-type: none"> <li>– <b>Cash available</b></li> <li>– <b>Internal tax appetite</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Host enters into a <b>Power Purchase Agreement (PPA)</b> or <b>lease agreement</b> where third party investor finances and owns system.</li> <li>• Host makes monthly payment to solar system owner.               <ul style="list-style-type: none"> <li>– For a <b>PPA</b>, this would be a \$/kWh price that is typically 15 to 20% lower than current retail rate</li> </ul> </li> <li>• More popular in post-1603 cash grant world.</li> </ul>

# Solar Project Finance 101

- Off-take Agreement**
- PPA
  - Lease

- Capital Structure**
- Sponsor Equity
  - Tax Equity
  - Debt



# What does a PPA look like?

- **Electricity rate, escalator, and term**
  - **Host X** to purchase power from solar system owner at a price of \$0.11/kWh for a term of 20 years with a 2% annual escalator
    - Host likely buying electricity at a retail rate of ~\$0.13/kWh
    - Could tie rate to retail rate....but what is issue then?
- **Size of the project**
  - **Host X** agrees to purchase 100% of project output
    - Size system to host's electricity usage, or rely on net metering
- **Site control**
  - **Host X** grants site control to solar system owner for the purpose of installing and maintaining solar system
    - Does the electricity offtake also own the building?

# Solar Development Strategy: Importance of the PPA

- **The PPA is the document used by the investor to finance the project, meaning:**
  - A. Host credit and financial standing is key -> will they be around in 20 years?
    - Investor will want to see either:
      - Credit Rating from Moody's, Fitch, or S&P; or
      - 3 years of audited financials.
    - **Municipalities, government entities, and large publicly traded companies** are best bet.
      - However, some funds are more flexible and will take on private companies, non-profits, etc.
  - B. Are terms and PPA language favorable enough to solar investor?
    - *Caution:* You will want to get your client a good deal... but not make out of market promises and concessions that no one will finance.

# Solar Development Strategy: Other Aspects to Consider

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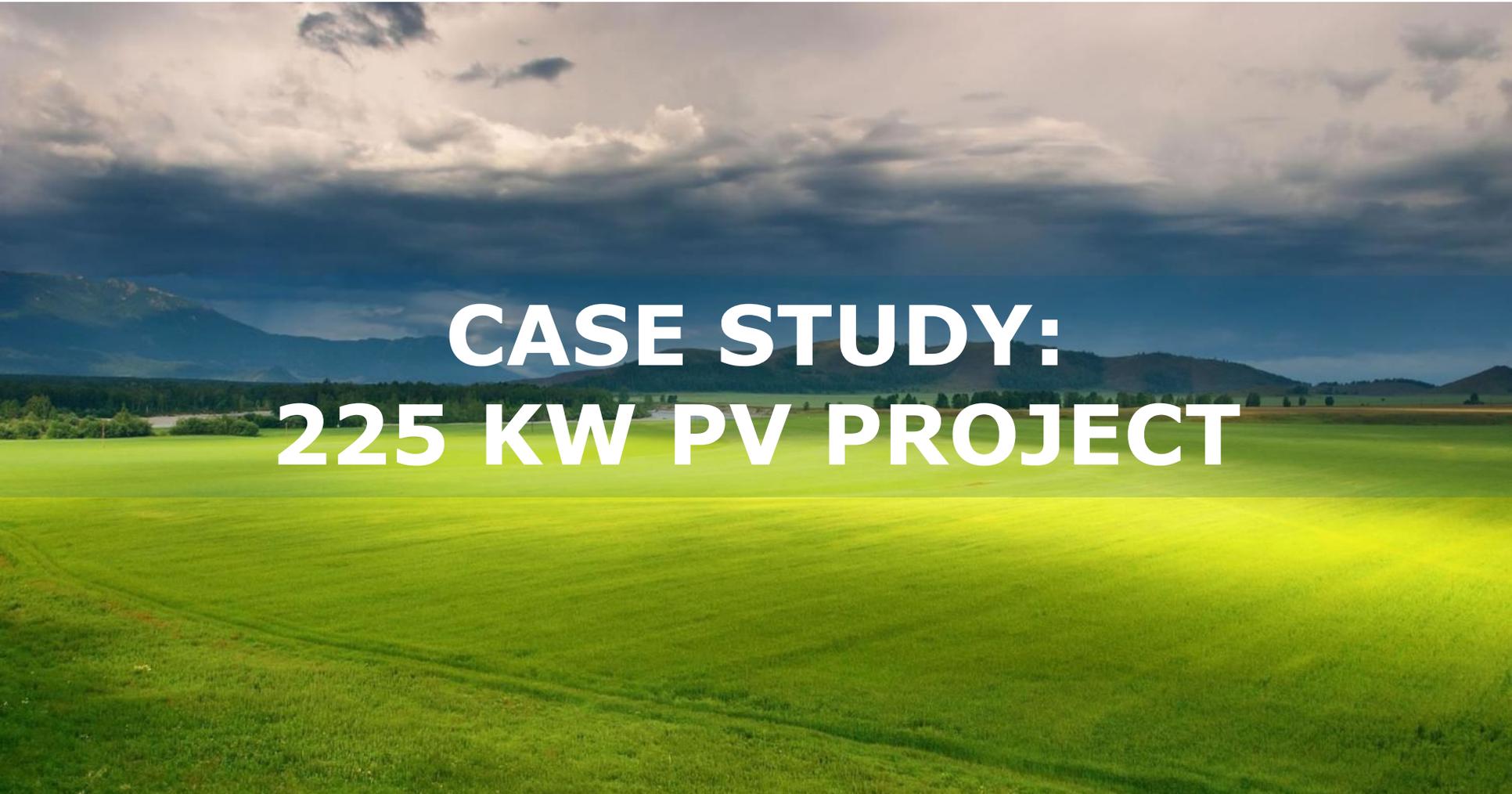
**What else should you consider when looking at project opportunities?**

- A. Roof Quality:** Most investors will want a roof with at least 10-15 years left on their warranty. *Caution:* If a roof needs to be replaced, then this may kill a lot of deals because these costs are not ITC (Investment Tax Credit) eligible.
  
- B. Project Size:** Most investors will be most interested in projects above 500 kW, so select a site that can fit a good amount of solar.
  
- C. SREC Strategy:** Typically uncontracted revenue, so how should you and your client value properly?
  
- D. Pick the Right Investor Partner:** A lot of \$\$\$ out there, *but* fewer players that can actually execute.

# DC Community Solar

- Community Renewables Energy Act of 2013 would allow for **virtual net-metering** in DC.
  - DC Council voted to approve this past July, second reading and vote expected in the Fall session.
  - DC residents could essentially subscribe/pay for a solar system located anywhere else in their community and then receive credits on their utility bill for portion of clean energy produced.





# CASE STUDY: 225 KW PV PROJECT

# Case Study

- **225 kW capacity, DC located**
- **Local developer**
- **Offtake:**
  - PPA with a bankable, national non-profit host
- **Capital Structure:**
  - Third party financed
  - One investor to provide sponsor equity and tax equity
- **SREC Contract:**
  - Sol Systems to provide an SREC contract





# Thank You! Questions?

Andrew Gilligan

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DISTRICT OF COLUMBIA SUSTAINABLE ENERGY UTILITY

# Financing Green Building Improvements in the District

**John Supp**

Director, Commercial & Institutional

# DC Sustainable Energy Utility Performance Benchmarks

- Energy Efficiency Improvements District-Wide
  - Gas and Electric
- Reduction in kW Demand
- Increase of Renewable Energy Generating Capacity
- Specific Commitment to Affordable Housing
- Utilize local businesses (CBE)
- Develop Green Jobs

# DC SEU Results – FY12 ONLY

- Electricity consumption reduction of more than 24,000,000 kWh
- Gas reduction of 58,150 therms
- Funded installation of 153kW DC of Solar Electric (PV) on single family low-income residences
- Reduced first-year energy costs by \$2.8 million
- \$24 million in lifetime benefits from FY12 activity
- Over 19,000 residential, commercial, and institutional customers supported

# Where can you find the DC SEU?

## Market-Rate Residential

- **Home Performance with ENERGY STAR incentives**
- **Retail Efficient Products – rebates and buydowns**

## Affordable Housing Residential

- **DC Home Performance for Low-Income Homeowners**
- **Food Bank Distribution of Efficient Products**
- **Comprehensive Low-Income Multifamily Initiative**
- **Low-Income Multifamily Direct Product Installation**
- **Small-Scale Solar Installations**

## Commercial and Institutional

- **Benchmarking Help Center**
- **Commercial and Institutional Custom Incentives**
- **Business Energy Rebates**
- **T12 Market Transformation**

# Role of DC SEU Financing Energy Efficiency

- DC SEU assists commercial and institutional customers in making the best decisions.
  - Technical
    - Review the proposed solution for viability
    - Suggest alternate technologies
  - Financial
    - Generate cash flow/IRR/NPV based on our calculated savings
      - Cash
      - Financing
    - Provide Incentives to help the project move forward

# Financing Energy Efficiency

- What is the objective of the project itself?
- What alternatives am I really considering?
  - Ok product for cash or better product financed
  - Ok product financed or no product at all
- What else would I do with the money?
  - Can I finance an energy savings project and use the savings for other capital expenditures?
  - Can I use the incentives to improve the rate or term of the loan?
  - Can I use the incentives to complete another objective?
- How long will the measure last vs duration of loan?

# The case for financing - simple

<b>\$40,000 Widget \$5,000 DC SEU incentive</b>	<b>Cash</b>	<b>Financed Loan buy down</b>	<b>Financed Cash out</b>
Out of Pocket	(\$35,000)	\$0	\$5,000
Annual Energy Savings	\$14,000	\$14,000	\$14,000
Annual Debt Service	\$0	(\$10,500)	(\$12,275)

# The case for financing - Complex

<b>\$40,000 for a 5 year Widget \$5,000 DC SEU incentive</b>	<b>Cash</b>	<b>Financed Loan buy down</b>	<b>Financed Cash out</b>
Out of Pocket	(\$35,000)	\$0	\$5,000
Annual Energy Savings	\$14,000	\$14,000	\$14,000
Annual Debt Service	\$0	(\$10,500)	(\$12,275)

<b>\$60,000 for an 8 year Widget \$10,000 DC SEU incentive</b>	<b>Cash</b>	<b>Financed Loan buy down</b>	<b>Financed Cash out</b>
Out of Pocket	(\$50,000)	\$0	\$10,000
Annual Energy Savings	\$16,000	\$16,000	\$16,000
Annual Debt Service	\$0	(\$14,500)	(\$18,000)

# DC SEU – The Resource

- Help ask the right questions and evaluate different scenarios
- Knowledge of financing vehicles
  - Conventional – via banks, equipment suppliers, other lenders
  - PACE – off balance sheet loan tied to property tax
  - 3<sup>rd</sup> party “on-bill” - retail power provider may finance EE on-bill
  - Revolving Loan Funds – internal loans repaid via energy savings
- Provide Neutral financial analyses for cash as well as financed options
- Contribute financial incentives toward the project

**DC SEU**  
**Your Energy Efficiency Resource**

[www.DCSEU.com](http://www.DCSEU.com)

202-479-2222



**PACE COMMERCIAL**  
*an energy finance solution*

The logo features the letters 'DC' in a bold, dark blue font. A yellow five-pointed star is positioned between the two letters. Below the logo, the text 'PACE COMMERCIAL' is written in a bold, green, sans-serif font, and 'an energy finance solution' is written in a smaller, italicized, dark blue font.

# What is PACE financing?

## Property Assessed Clean Energy

DC was designated a PACE land-secured financing district through Energy Efficiency Financing Act of 2010



Commercial property owners can apply to use a PACE Assessment for energy and resource improvements



Capital Provider buys revenue bond secured by PACE Assessment in amount of energy project



Property owner pays assessment through property tax bill (up to 20 years)



In addition to DC, 30 states have authorized PACE

# Program Overview

## What kind of projects are eligible?

- Available to Commercial and MF properties
- Eligible measures include energy efficiency, renewables, water, and storm water mitigation improvements
- Estimated savings must exceed assessment amount (aka SIR >1)
- Appropriate for projects costing at least \$250k

## What is the structure of the financing?

- Property owner can finance up to 100% of project costs
- Interest Rate: Approximately 6%
- Term: up to 20 years
- Loan to Value: max of 80% (PACE Assessment limited to 10% of assessed value)
- Assessment stays with property on sale
- Potentially off balance sheet

## Where can I find more information?

- [DCPACE.com](http://DCPACE.com)

# Case Study: 400 M St SE

## 1<sup>st</sup> Use of PACE for Affordable Multifamily Project

### Property:

- 139 Unit Affordable Multi-Family
- Part of HUD Hope VI development

### Project:

- \$340,000 PACE Assessment
- Installed Measures:
  - Common area lighting and controls
  - water fixtures
  - 37kw PV installation
- Energy Savings:
  - 15% reduction in energy use
  - + 3.5% of energy sourced from solar
- Total annual benefits: \$41,000
- Annual assessment payment: \$30,000



# Questions?



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